IN THE CLAIMS:

Please AMEND claims 1-7, 9-11, and 13-30; and

Please ADD new claims 31-37, as shown below.

1. (Currently Amended) A method ~~for broadcasting beacon frames in a short-range wireless ad-hoc network including a plurality of wireless terminals~~, ~~the method~~ comprising ~~the steps of~~:

- establishing a beacon interval for an ad-hoc network, the beacon interval being established in a first wireless terminal;

- broadcasting beacon frames from the first wireless terminal at the beacon intervals, ~~whereby~~wherein the first wireless terminal starts to act as a beacon broadcaster in the ad-hoc network and one wireless terminal at a time acts as the beacon broadcaster during normal operation of the ad-hoc network; and

- introducing an identifier list into at least some of the beacon frames, the identifier list including identifiers of wireless terminals belonging to the ad- hoc network.

2. (Currently Amended) A method according to claim 1, further comprising ~~a step of~~ utilizing the identifier list if another wireless terminal than said first wireless terminal is to be selected as the beacon broadcaster.

3. (Currently Amended) A method according to claim 2, further comprising ~~a step of~~ selecting another wireless terminal than said first wireless terminal as the beacon broadcaster, wherein the selecting ~~step~~ is performed at predetermined intervals longer than one beacon interval and the selecting ~~step~~ includes choosing said another wireless terminal according to a predetermined rule from the identifier list.

4. (Currently Amended) A method according to claim 3, further comprising ~~a step of~~ indicating the predetermined intervals in the beacon frame.

5. (Currently Amended) A method according to claim 2, further comprising ~~a step of~~ choosing another wireless terminal than said first wireless terminal as the beacon broadcaster, when a predetermined number of beacon intervals is elapsed without a beacon frame being broadcast, wherein said choosing ~~step~~ includes choosing said another wireless terminal according to a predetermined rule from the identifier list.

6. (Currently Amended) A method according to claim 1, further comprising ~~a step of~~ transmitting, when a wireless terminal joins the ad-hoc network, an identifier of the wireless terminal to the wireless terminal currently acting as the beacon broadcaster.

7. (Currently Amended) A method according to claim 1, further comprising ~~a step of~~ sending at least one traffic announcement message to the wireless terminal

currently acting as the beacon broadcaster, each traffic announcement message identifying at least one wireless terminal for which another wireless terminal has data to be delivered.

8. (Original) A method according to claim 7, wherein the wireless terminal acting as the beacon broadcaster is the first wireless terminal.

9. (Currently Amended) A method according to claim 1, further comprising ~~a step of~~ organizing the identifiers of the wireless terminals in a priority order, which determines the order in which the terminals act as the beacon broadcaster.

10. (Currently Amended) A method according to claim 7, further comprising ~~a step of~~:

- based on at least one traffic announcement message, compiling a traffic indication data element; and

- inserting the traffic indication data element into a selected subsequent beacon frame.

11. (Currently Amended) A method according to claim 10, further comprising ~~a step of~~ indicating a moment of the selected subsequent beacon frame in the beacon frame.

12. (Original) A method according to claim 10, wherein the traffic indication data element includes a bit string, where each bit corresponds to a terminal in the identifier list.

13. (Currently Amended) A method according to claim 1, wherein the identifier list contains ~~MAC~~media access control addresses of the wireless terminals belonging to the ad-hoc network.

14. (Currently Amended) A method according to claim 1, further comprising ~~a step of~~ inserting power state information in the identifier list, the power state information indicating whether a wireless terminal mentioned in the list is in a power save state.

15. (Currently Amended) An apparatus ~~wireless terminal for a wireless short-range ad-hoc network~~, ~~the wireless terminal~~ comprising:

- ~~receiver means~~a receiver ~~for receiving~~configured to receive beacon frames at beacon intervals, at least some of the beacon frames including an identifier list including identifiers of terminals belonging to an ad-hoc network;

- ~~control means~~a controller ~~for deciding~~configured to decide, based on the identifier list, whether a~~the~~ wireless terminal is to be selected as a beacon broadcaster in the ad-hoc network; and

- ~~beacon broadcaster means~~a transmitter, responsive to the ~~control means~~controller, ~~for broadcasting~~configured to broadcast beacon frames in the ad-hoc network, the ~~beacon broadcasting means~~transmitter being configured to insert the identifier list in at least some of the beacon frames broadcast by the wireless terminal.

16. (Currently Amended) ~~A wireless terminal~~The apparatus according to claim 15, ~~wherein~~~~further comprising~~ the transmitter~~means~~ ~~for sending~~configured to send at least one traffic announcement message to another wireless terminal, wherein said at least one traffic announcement message identifies at least one wireless terminal for which the wireless terminal has data to be delivered, and wherein said another wireless terminal is the beacon broadcaster in the ad-hoc network.

17. (Currently Amended) ~~A wireless terminal~~The apparatus according to claim 15, further comprising ~~processing means~~a processor ~~for receiving~~configured to receive and handle~~ing~~ at least one traffic announcement message identifying at least one wireless terminal for which data is to be delivered in the ad-hoc network, the ~~processing means~~processor being configured to ~~(a)~~ compile, based on the at least one traffic announcement message, a traffic indication data element,[[;]] and ~~(b)~~ to insert the traffic indication data element into a selected subsequent beacon frame.

18. (Currently Amended) ~~A wireless terminal~~The apparatus according to claim 15, wherein~~further comprising~~ the transmitter~~means~~ is ~~for transmitting~~configured to transmit an identifier of the wireless terminal to another wireless terminal acting as the beacon broadcaster in the ad-hoc network.

19. (Currently Amended) ~~A wireless terminal~~The apparatus according to claim 15, wherein the identifier list includes ~~MAC~~media access control addresses of the wireless terminals belonging to the ad-hoc network.

20. (Currently Amended) ~~A wireless terminal~~The apparatus according to claim 16, wherein the traffic announcement message includes a bit string where each bit corresponds to a terminal in the identifier list.

21. (Currently Amended) ~~A wireless terminal~~The apparatus according to claim 16, wherein the traffic indication data element includes a bit string where each bit corresponds to a terminal in the identifier list.

22. (Currently Amended) An apparatus ~~wireless terminal for a wireless short-range ad-hoc network~~, ~~the wireless terminal~~ comprising:

~~beacon broadcasting means~~a transmitter ~~for broadcasting~~configured to broadcast beacon frames at beacon intervals in an~~the~~ ad-hoc network, wherein the ~~beacon~~

~~broadcasting means~~transmitter is~~are~~ configured to insert an identifier list in at least some of the beacon frames, the identifier list including identifiers of wireless terminals belonging to the ad-hoc network.

23. (Currently Amended) ~~A wireless terminal~~The apparatus according to claim 22, further comprising a processor~~means for establishing~~configured to establish a beacon interval for the ad-hoc network.

24. (Currently Amended) ~~A wireless terminal~~The apparatus according to claim 22, further comprising ~~processing means~~a processor ~~for receiving~~configured to receive and handle~~ing~~ at least one traffic announcement message identifying at least one wireless terminal for which data is to be delivered in the ad-hoc network, the ~~processing means~~processor being configured to ~~(a)~~ compile, based on the at least one traffic announcement message, a traffic indication data element,[[;]] and ~~(b)~~ to insert the traffic indication data element into a selected subsequent beacon frame.

25. (Currently Amended) A ~~short-range wireless ad-hoc~~ network, comprising:

- a wireless terminal acting as a beacon broadcaster in the ~~ad-hoc~~ network, the beacon broadcaster being configured to broadcast beacon frames at beacon intervals and to introduce an identifier list into at least some of the beacon frames, the identifier list including identifiers of wireless terminals belonging to the ~~ad-hoc~~ network; and

- at least one other wireless terminal configured to extract the identifier list from a beacon frame, wherein said at least one other wireless terminal is provided with ~~control means~~a controller ~~for deciding~~configured to decide, based on the identifier list, whether one of the at least one other wireless terminal is to be selected as the beacon broadcaster in the ~~ad-hoc~~ network.

26. (Currently Amended) A ~~short-range wireless ad-hoc~~ network according to claim 25, wherein the at least one other wireless terminal comprises a transmitter~~means for sending~~configured to send traffic announcement messages to the wireless terminal acting as the beacon broadcaster, wherein one traffic announcement message identifies at least one wireless terminal for which the at least one other wireless terminal has data to be delivered,[[;]] and the wireless terminal acting as the beacon broadcaster comprises ~~processing means~~a processor ~~for handling~~configured to handle said at least one traffic announcement message, said ~~processing means~~processor being configured to ~~(a)~~ compile, based on at least one traffic announcement message received, a traffic indication data element,[[;]] and ~~(b)~~ to insert the traffic indication data element into a selected subsequent beacon frame.

27. (Currently Amended) A ~~short-range wireless ad-hoc~~ network according to claim 25, wherein each wireless terminal of said at least one other wireless terminal

further comprises a transmitter~~means for transmitting~~configured to transmit an identifier of the wireless terminal to the wireless terminal acting as the beacon broadcaster.

28. (Currently Amended) A ~~short-range wireless ad-hoc~~ network according to claim 25, wherein the identifier list includes ~~MAC~~media access control addresses of the wireless terminals belonging to the ~~ad-hoc~~ network.

29. (Currently Amended) A ~~short-range wireless ad-hoc~~ network according to claim 25, wherein the traffic announcement message includes a bit string where each bit corresponds to a terminal in the identifier list.

30. (Currently Amended) A ~~short-range wireless ad-hoc~~ network according to claim 25, wherein the traffic indication data element includes a bit string where each bit corresponds to a terminal in the identifier list.

31. (New) A method, comprising:

- receiving beacon frames at beacon intervals, at least some of the beacon frames including an identifier list including identifiers of terminals belonging to an ad-hoc network;

- deciding, based on the identifier list, whether a wireless terminal is to be selected as a beacon broadcaster in the ad-hoc network;

- responsive to the deciding, broadcasting beacon frames in the ad-hoc network; and

- inserting the identifier list in at least some of the beacon frames broadcast by the wireless terminal.

32. (New) The method according to claim 31, further comprising sending at least one traffic announcement message to another wireless terminal, wherein said at least one traffic announcement message identifies at least one wireless terminal for which the wireless terminal has data to be delivered, and wherein said another wireless terminal is the beacon broadcaster in the ad-hoc network.

33. (New) The method according to claim 31, further comprising:

receiving and handling at least one traffic announcement message identifying at least one wireless terminal for which data is to be delivered in the ad-hoc network;

compiling, based on the at least one traffic announcement message, a traffic indication data element; and

inserting the traffic indication data element into a selected subsequent beacon frame.

34. (New) The method according to claim 31, further comprising transmitting an identifier of the wireless terminal to another wireless terminal acting as the beacon broadcaster in the ad-hoc network.

35. (New) A computer-readable storage medium encoded with instructions configured to control a processor to perform a process, comprising:

- establishing a beacon interval for an ad-hoc network, the beacon interval being established in a first wireless terminal;

- broadcasting beacon frames from the first wireless terminal at the beacon intervals, wherein the first wireless terminal starts to act as a beacon broadcaster in the ad-hoc network and one wireless terminal at a time acts as the beacon broadcaster during normal operation of the ad-hoc network; and

- introducing an identifier list into at least some of the beacon frames, the identifier list including identifiers of wireless terminals belonging to the ad- hoc network.

36. (New) A computer-readable storage medium encoded with instructions configured to control a processor to perform a process, comprising:

- receiving beacon frames at beacon intervals, at least some of the beacon frames including an identifier list including identifiers of terminals belonging to an ad-hoc network;

- deciding, based on the identifier list, whether a wireless terminal is to be selected as a beacon broadcaster in the ad-hoc network;

- responsive to the deciding, broadcasting beacon frames in the ad-hoc network; and

- inserting the identifier list in at least some of the beacon frames broadcast by the wireless terminal.

37. (New) An apparatus, comprising:

- receiver means for receiving beacon frames at beacon intervals, at least some of the beacon frames including an identifier list including identifiers of terminals belonging to an ad-hoc network;

- control means for deciding, based on the identifier list, whether a wireless terminal is to be selected as a beacon broadcaster in the ad-hoc network; and

- beacon broadcasting means, responsive to the control means, for broadcasting beacon frames in the ad-hoc network, the beacon broadcasting means being configured to insert the identifier list in at least some of the beacon frames broadcast by the wireless terminal.